



Cell Phone Use & Driving A Traffic Safety Epidemic

• NHTSA's National Highway Traffic Safety Administration

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2016 Municipal Judges Conference

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David Teater





Cell Phone Use & Driving A Traffic Safety Epidemic


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Our Mission

The National Safety Council saves lives by preventing injuries and deaths at work, in homes and communities, and on the roads through leadership, research, education and advocacy.


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Motor vehicle crashes

- 1 million people have died in motor vehicle crashes in the last 25 years
- 35,000 deaths each year in the U.S.
- Leading cause of on and off-the-job unintentional deaths in the U.S.
- Leading cause of death for people 5- to 35 years old
- Cost to society = \$100 billion per year
- Society appears to have grown complacent, accepting these deaths and injuries
- Safety engineering has made significant advances

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Motor vehicle crashes


Vehicle maintenance factors
 – Critical reason for crash – 2% of the time

Environmental factors
 – Critical reason for crash – 2% of the time

Human error
 – Critical reason for crash – 94% of the time

Source: NHTSA Traffic Safety Facts, February 2015

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Driving distractions

The Science of Distraction

Visual: eyes on road
Mechanical: hands on wheel
Cognitive: mind on driving

- Visual and mechanical distractions are short lived - cognitive distractions last much longer
- Much more than "eyes on the road, hands on the wheel"


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Selective attention / switching

1. No such thing as "multi-tasking" When brains are overloaded by two cognitive tasks, people switch attention (without recognizing it)
2. Make one task "primary" and the other "secondary" Cognitive attention to driving becomes secondary to a phone conversation
3. When driving is a secondary task for the brain, driving becomes impaired Impairment takes several forms, including inattention blindness and tunnel vision

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"Tunnel Vision"



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Crashes and cell phones

Risk – how risky is the distraction


Reading	3.4x
Reaching for a moving object	8.8x
Turning around in a seat	8.8x
Talking on a cell phone	4x
Texting	8x

Prevalence – how often is it happening

Manipulating a wireless device	1.7%
Talking on a cell phone	9%

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Crashes and cell phones (2012)

- Minimum of 341,000 crashes
 - 6% of all crashes, involve texting
- 1.2 million crashes per year
 - 21% of all crashes, involve cell phone conversations

27% of all crashes involve cell phone use

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What we know about cell phone use and driving

Role of Mobile Phones in Motor Vehicle Crashes Resulting in Hospital Attendance
 Suzanne P McEvoy, Mark R Stevenon, Anne T McCull, et al - 2004

- Likelihood of crashing increases by 4x
- Risk was raised irrespective of whether or not a hands-free device was used

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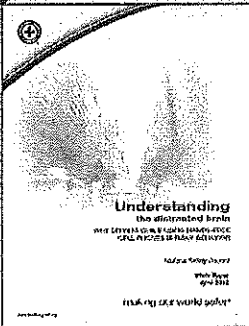
Hands-free and crash risk

Hands free devices do not reduce crash risk:

- National Safety Council
- National Transportation Safety Board
- World Health Organization
- Insurance Institute for Highway Safety
- Governors Highway Safety Association

- 30+ studies reported substantial negative effects of cell phone use on driving for hands-free and handheld phones
- Similar effects in reaction time, speed, headway and lateral lane position, for hands-free and handheld phones

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Free download at:
thebrain.nsc.org

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What we know about cell phone use while driving

Comparison of the Cell Driver and Drunk Driver
 Strayer, Drews, et al, University of Utah - 2004

- No difference between handheld and hands-free
- Cell phone distracted drivers have slower reaction times and were more likely to crash than drivers with a .08 BAC

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What we know about cell phone distraction

A Decrease in Brain Activation Associated With Driving
 Carnegie Mellon University, Center for Cognitive Brain Imaging - 2008

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Result

The parietal activation associated with driving decreases substantially (by 37%) with sentence listening.

Driving Alone	Driving with Sentence Listening
	
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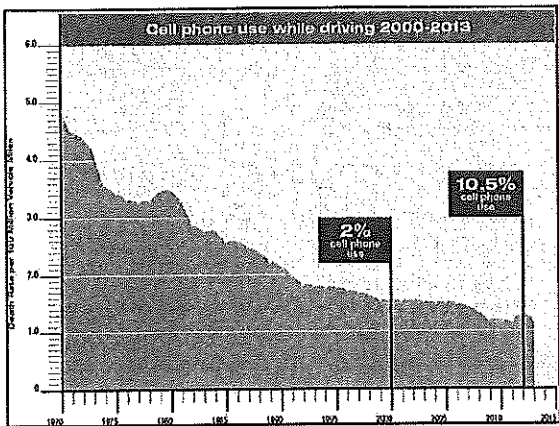
Misperceptions

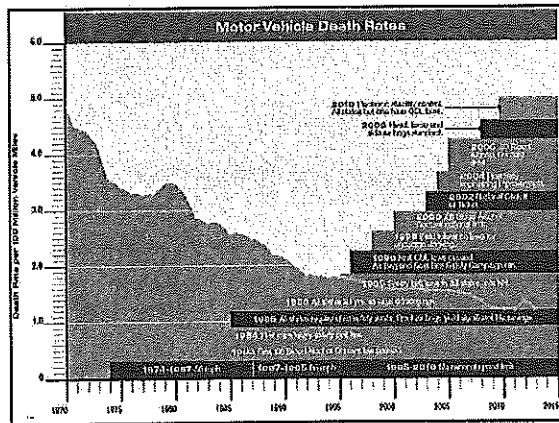
If talking on a cell phone is so dangerous, and cell phone use has exploded in the last 10 years, why haven't we seen a spike in crashes and fatalities?


Crashes have actually decreased 9% since 2000 and fatalities have also trended downward.

How can this be?

Division of Motor Vehicle Safety making our world safer







Misperceptions


It's no more dangerous than talking to a passenger

- A passenger in a vehicle is aware of the driving situation and can even serve as an additional look-out
- The phone carries a certain obligation of immediacy

There isn't enough evidence to prove that using a cell phone while driving causes crashes

- Difficult to collect crash data
- Much evidence, few statistics
- An absence of statistics does not prove or even indicate the absence of a problem

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Misperceptions

What about voice texting? That must be safer than typing texts, right?

- Two recent studies from AAA Foundation for Traffic Safety and Texas A&M found same result
- Voice texting is more distracting than typing texts
- Drivers look away more
- It took longer to send a voice text

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Misperceptions

What about 2 way radios? Navigation? Books on tape?

- Simplex communication occurs in one direction only
- Shorter duration and less complex
- Never input navigation while the vehicle is moving
- Voice directions may be less distracting than reading a map and street signs
- Not a two way, duplexed conversation. Easier to disengage.

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NTSB Recommends:

- (1) Ban the nonemergency use of portable electronic devices (other than those designed to support the driving task) for all drivers;
- (2) Use the National Highway Traffic Safety Administration model of high visibility enforcement to support these bans; and
- (3) Implement targeted communication campaigns to inform motorists of the new law and enforcement, and to warn them of the dangers associated with the nonemergency use of portable electronic devices while driving.

December 13, 2011

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OSHA and distracted driving

October 4, 2010

"To combat the threat of distracted driving, we are prepared to act quickly. When OSHA receives a credible complaint that an employer requires texting while driving or who organizes work so that texting is a practical necessity, we will investigate and where necessary issue citations and penalties to end this practice."

David Michaels, PhD, MPH

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Sample cell phone policy

Company employees may not use cellular telephones or mobile electronic devices while operating a motor vehicle under any of the following situations, regardless of whether a hands-free device is used:

- When employee is operating a vehicle owned, leased or rented by the Company.
- When the employee is operating a personal motor vehicle in connection with Company business.
- When the motor vehicle is on Company property.
- When the cellular telephone or mobile electronic device is company owned or leased.
- When the employee is using the cellular telephone or mobile electronic device to conduct Company business.

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Companies with policies

- Exxon/Mobil
- DuPont
- Halliburton
- Shell
- Chevron
- BP
- Enbridge
- AstraZeneca
- Spectra Energy
- CA Office of Traffic Safety
- Abbott
- EnCana
- CSX Intermodal
- Schneider National
- Sysco Corporation
- Time Warner Cable
- Potash
- Owens Corning
- NTSB

Just a sample - no national database of companies with policies

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What about productivity?

Survey of AMEC employees one year after corporate cell phone driving ban

- 97% agreed talking on a cell phone impacts a person's ability to drive safely
- 96% felt responsible companies should discourage use of wireless communications while driving
- 95% did not experience a decrease in productivity as a result of the ban during work hours
- 83% reduced or quit using wireless devices while driving outside of work hours

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Company cell phone policies

Survey of NSC member companies – August 2009

- 2,004 respondents
- 469 (23.3%) had bans that included both hands-free and handheld wireless communication devices
- 36.1% of NSC members w/o policies have plans in the next 12 months to create policies
- Only seven companies (1.5%) with policies reported a decrease in employee productivity
- 46 companies (10%) reported a productivity increase

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Company cell phone policies

Survey of Fortune 500 companies – September 2010

- 20% of Fortune 500 companies surveyed have total bans in place – estimated 2 million+ employees
- 22 percent of companies with total bans said they experienced decreased crash rates, and the same experienced decreased property damage, indicating the policies work
- Among those who responded and had total bans
 - 19 percent said productivity increased
 - 22 percent said productivity remained the same
 - 52 percent don't yet know impact on productivity
 - 7 percent said productivity decreased

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Company cell phone policies

Why no decrease in productivity?

- Most calls are not as "business critical" as assumed
- Every employee and every company "adapts" (e.g. trip planning)
- Employees less stressed – they make better decisions
- Drivers no longer take time from non-driving staff

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Employer liability

\$21.6 million: A stay-at-home dad received the award for the violent wreck that killed his wife, after a jury found a driver negligent for either talking on her cell phone or some other distraction.

\$21 million: A soft drink beverage salesperson driving a passenger vehicle was using a hands-free headset, in compliance with a handheld ban, when she struck another vehicle and injured the driver. A jury awarded \$21 million in damages to the injured driver.

\$20.9 million: Dykes Industries of Little Rock, Ark., lost a personal injury suit in which its employee was using a cell phone when the crash occurred.

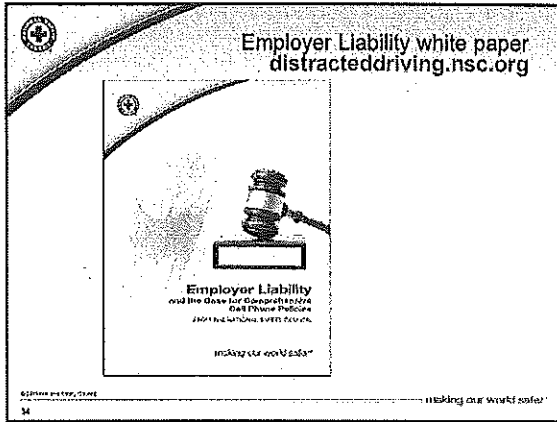
\$18 million: Holmes Transport, of Muscle Shoals, Ala., was ordered to pay the damages by a U.S. District Judge to Mark Tiburzi who was left unable to walk or talk after a crash caused by one of their drivers distracted by a cell phone.

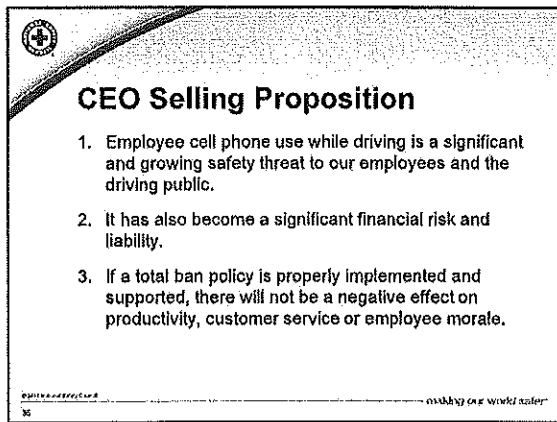
\$6.2 million: International Paper employee Vanessa McGrogan was using her company-supplied cell phone when she rear-ended a vehicle driven by Debra Ford.

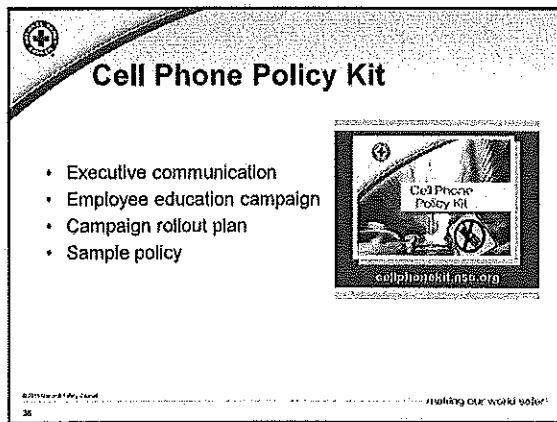
\$2.5 million: State of Hawaii agreed to pay as its share of liability in a crash involving a state employee who was talking on her cell phone when she hit a tourist.


\$1.5 million: City of Palo Alto has agreed to pay the victim of a 2006 vehicle crash involving a city worker who was using his cell phone while driving.

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Enforcement

- Standard crash review includes review of cell records
- Peer to peer enforcement
- Technology


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Technology: may be best solution

- Signal jamming
 - Jamming device in vehicle
 - Limited geographic reach
 - Currently illegal
- Smartphone app without vehicle integration
 - Uses phone's GPS to trigger "driving condition"
 - Sends calls to VM, stores texts and emails
- Smartphone app with vehicle integration
 - Sensor plugs in to vehicle OBD port
 - Communicates "driving" to phone via Bluetooth
- Wireless network solution
 - "Thin client" on smart phone signals network of "driving condition"
 - Network applies call management tools

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Public support


Quinnipiac University

- 2424 US Voters
- November 2010, +/- .02
- By a 63% – 34% margin, American voters support a federal ban on cell phone use while driving, even while using a "hands-free" device

Nationwide Insurance "On Your Side Survey"

- 1008 US drivers
- August 2009, +/- .03
- 80% support ban on texting or emailing
- 57% support a ban on all cell phone use while driving

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Public support

According to the National Highway Traffic Safety Administration (NHTSA), current scientific research indicates that using a wireless phone while driving degrades a driver's performance, whether with a hands-free or hand-held wireless phone. NHTSA advises that the safest course of action is to refrain from using a wireless phone while driving.

Consider turning your phone off and allowing calls to go to voicemail while driving—for your safety and that of those around you.

-Verizon website
July 2013

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Public Positions


- Wireless Carriers – generally supportive
- Auto and Consumer Electronics Industries

"Eyes on the road and hands on the wheel"

"Talking - be it interacting with passengers or on the cell phone - has a mixed effect on driving safety. In fact, in the case of drowsy drivers (e.g. truckers), talking on cell phones can actually reduce crashes. Evidence shows that so-called 'cognitive distractions' aren't much of an issue, but physical distractions are."

Source: Ford Motor Company


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Takeaways


- We need full attention for the task of driving - cognitive distraction is real - Multitasking is a myth
- Hands-free is not risk free
- Risk exposure is what makes cell phone use the biggest threat
- A total ban on employee cell phone use while driving is "best safety practice" and your company's best defense against liability exposure.

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 **Takeaways**


- We need full attention for the task of driving - cognitive distraction is real - Multitasking is a myth
- Hands-free is not risk free
- Risk exposure is what makes cell phone use the biggest threat

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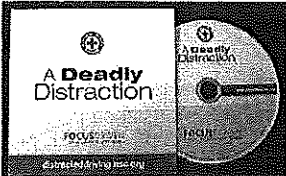
 **What you can do**

- Personal example – stop using cell phone when driving (change no answer greeting)
- Don't talk with people who call you while they are driving
- Educate employees, drivers, parents, friends and family
- Implement cell phone driving bans
- Support legislation and enforcement
- Hold offenders accountable

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 **A Deadly Distraction**
nsc.org/cellphoneDVD

- Full one hour presentation
- 25 minute highlights version
- All proceeds support FocusDriven



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